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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/940,754	08/28/2001	Christopher D. Paulson	01-3491496.00141	7667
24319	7590	08/16/2004	EXAMINER	
LSI LOGIC CORPORATION 1621 BARBER LANE MS: D-106 LEGAL MILPITAS, CA 95035			DO, CHAT C	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/940,754	Applicant(s) PAULSON ET AL.	
	Examiner Chat C. Do	Art Unit 2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5, 9-10, 15, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re claim 5, it is unclear by the limitation "one of signals" whether the mentioned signal is the input signal, the signal after sampling, or the intermediate signal after selecting. For examination purposes, the examiner considers the signal as the output signal of the selection circuit. Claim 15 has the same problem.

Re claim 9, it is unclear by the limitation "selected number is unequal to second selected number" whether the first selected number is not equal to second selected number in value or length. For examination purposes, the examiner considers the first selected number is not equal to second selected number in value. Claim 19 has the same problem.

Thus, claim 10 is also rejected for being dependent on the rejected base claim 9.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Zhou (U.S. 6,389,438).

Re claim 1, Zhou discloses in Figure 13 a circuit comprising: a first circuit (e.g. the A/D box as Analog to digital circuit) configured to detect state of an input signal and each representative of state of input signal during a present a plurality of intermediate signals plurality of clock cycles (the A/D circuit is used to convert an analog input signal to a digital output signal by sampling with clock); and a second circuit (e.g. the lower portion of circuit including XORx and ADD wherein these logics are used as a matched filter) configured to present a filtered signal response a selected number of intermediate signals having a predetermined state (e.g. either match or un-match state).

Re claim 2, Zhou further discloses in Figure 13 first circuit (e.g. A/D circuit) comprises: a third circuit (e.g. sampling) configured to (i) detect state of input signal and (ii) present a detected signal representing state of input signal; and plurality of shift registers configured to detected signal in each of clock sample cycles and (ii) present intermediate signals (e.g. the A/D box as Analog to digital circuit and the A/D circuit is used to convert an analog input signal to a digital output signal by sampling with clock).

Re claim 3, Zhou further discloses in Figure 13 fourth circuit configures to synchronize detected signal to a clock signal defining clock cycles (e.g. inherent feature for sampling an analog signal at regular period).

Re claim 4, Zhou further discloses in Figure 13 a plurality response (e.g. XOR1-XORn) to at least two logic gates each configured to present a signal intermediate signals (e.g. output of the SEL1 and SEL2); a multiplexer (e.g. SELx) configure present filtered signal. multiplex signals.

Re claim 5, Zhou further discloses in Figure 13 each of logic gates (e.g. lower portion of Figure 13) is configured to receive one of intermediate signals (e.g. output of SEL1) and one of signals (e.g. output of SEL2) and (ii) present one of signals (e.g. Aout).

Re claim 6, Zhou further discloses in Figure 13 another second circuit configured to present second filtered signal in response to a second selected number (e.g. SEL2) of intermediate signals having a second predetermined state (e.g. a2).

Re claim 7, Zhou further discloses in Figure 13 a third circuit (e.g. the lower portion of Figure 13) configured to present a status signal (e.g. Aout) responsive to filtered signal (e.g. a1) and second filtered signal (e.g. a2).

Re claim 8, Zhou further discloses in Figure 13 first selected number and second selected number is programmable (e.g. CLK3).

Re claim 9, Zhou further discloses in Figure 13 first selected number is unequal to second selected number (e.g. control to SEL1 is high and control to SEL2 is low).

Re claim 10, Zhou further discloses in Figure 13 predetermined state is a loss-of-signal state (e.g. output of SEL1) and second predetermined state is a signal present state (e.g. output of SEL2).

Re claim 11, it is a method claim of claim 1 with similar limitations. Thus, claim 11 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Re claim 12, it is a method claim of claim 2 with similar limitations. Thus, claim 12 is also rejected under the same rationale as cited in the rejection of rejected claim 2.

Re claim 13, it is a method claim of claim 3 with similar limitations. Thus, claim 13 is also rejected under the same rationale as cited in the rejection of rejected claim 3.

Re claim 14, it is a method claim of claim 4 with similar limitations. Thus, claim 14 is also rejected under the same rationale as cited in the rejection of rejected claim 4.

Re claim 15, it is a method claim of claim 5 with similar limitations. Thus, claim 15 is also rejected under the same rationale as cited in the rejection of rejected claim 5.

Re claim 16, it is a method claim of claim 6 with similar limitations. Thus, claim 16 is also rejected under the same rationale as cited in the rejection of rejected claim 6.

Re claim 17, it is a method claim of claim 7 with similar limitations. Thus, claim 17 is also rejected under the same rationale as cited in the rejection of rejected claim 7.

Re claim 18, it is a method claim of claim 8 with similar limitations. Thus, claim 18 is also rejected under the same rationale as cited in the rejection of rejected claim 8.

Re claim 19, it is a method claim of claim 9 with similar limitations. Thus, claim 19 is also rejected under the same rationale as cited in the rejection of rejected claim 9.

Re claim 20, it is a circuit claim of claim 1 with similar means limitations. Thus, claim 20 is also rejected under the same rationale as cited in the rejection of rejected claim 1.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. U.S. Patent No. 6,760,372 to Zortea et al. disclose an adaptive signal processor using an eye-diagram metric.
- b. U.S. Patent No. 4,641,259 to Shan et al. disclose an adaptive signal processing array with suppression of coherent and non-coherent interfering signals.
- c. U.S. Patent No. 4,587,620 to Niimi et al. disclose a noise elimination device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (703) 305-5655. The examiner can normally be reached on M => F from 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chaki Kakali can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2124

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2124

August 3, 2004

Kakali Chaki

**KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**